

# इंटरनेट

# मानक

## Disclosure to Promote the Right To Information

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 6893-6 (1985): Proforma for purchase specification for machine tools, Part 6: Bench/pillar type drilling machines [PGD 3: Machine Tools]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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## PART 6 BENCH/PILLAR TYPE DRILLING MACHINES

## 2. Proforma

<b>Specifications</b>	<b>Reference to Indian Standard</b>	<b>Unit</b>	<b>Actual Values</b>
(1)	(2)	(3)	(4)
<b>2.1 Type</b> Bench/Pillar			
<b>2.2 Drive</b> Belt/Gear			
<b>2.3 Capacity</b> <b>2.3.1 Drilling capacity</b> a) In steel having 600 MPa tensile strength b) Cutting speed c) Feed <b>2.3.2 Tapping capacity</b> a) Metric threads ( stds/fine ) up to b) Any other threads <b>2.3.3 Distances</b> a) Max/Min distance between work table and spindle b) Max/Min distance between spindle and base plate <b>2.3.4 Work table</b> a) Rectangular/circular b) Clamping area c) T-slots 1) Nominal size 2) Number/spacing <b>2.3.5 Max weight of the job (including fixture, etc) that can be loaded on the work table</b>	*IS : 7764-1975	mm m/min. mm/rev         mm mm    l × w/ $\phi$ mm mm <sup>2</sup>   mm mm  kg	

\*For pillar type only.

**Gr 3**

**IS : 6893 ( Part 6 ) - 1985**

Specifications	Reference to Indian Standard	Unit	Actual Values
(1)	(2)	(3)	(4)
<b>2.4 Drill Spindle</b>			
2.4.1 Taper in spindle bore	IS : 1715-1973		
2.4.2 Spindle travel		mm	
Auto/Manual			
<b>2.5 Spindle Speeds</b>			
2.5.1 No. of speeds/range	IS : 2218-1962	rev/min	
2.5.2 Infinitely variable <i>Min/Max</i>	(Speed torque characteristics to be specified)	rev/min	
<b>2.6 Feeds</b>			
2.6.1 No. of feeds/range	IS : 2219-1962	mm/min	
<b>2.7 Electricals</b>			
2.7.1 Total power		kW	
2.7.2 Power supply		V, Ph, Hz	
2.7.3 Main motor			
a) Type	IS : 1231-1974		
b) Frame size and mounting			
c) Output(s)		kW	
d) Speed(s)		rev/min	
e) No. of phases			
f) Power factor			
g) Efficiency		percent	
h) Rated voltage		V	
j) Frequency		Hz	
k) Type of duty			
m) Class of Insulation			
n) Ambient temperature		°C	
p) Type of protection	IS : 4691-1968		
q) Type of cooling	IS : 6362-1971		
r) Vibration limits	IS : 4729-1968	micron	
s) Any other features			
2.7.4 Auxiliary motor(s)			
a) Type	IS : 1231-1974		
b) Frame size and mounting			
c) Output(s)		kW	
d) Speed(s)		rev/min	
e) No. of phase		—	
f) Power factor		—	
g) Efficiency		percent	
h) Rated voltage		V	
j) Frequency		Hz	
k) Type of duty		—	
m) Class of insulation			
n) Ambient temperature		°C	
p) Type of protection	IS : 4691-1968		
q) Type of cooling	IS : 6362-1971		
r) Vibration limits	IS : 4729-1968	micron	
s) Any other features			

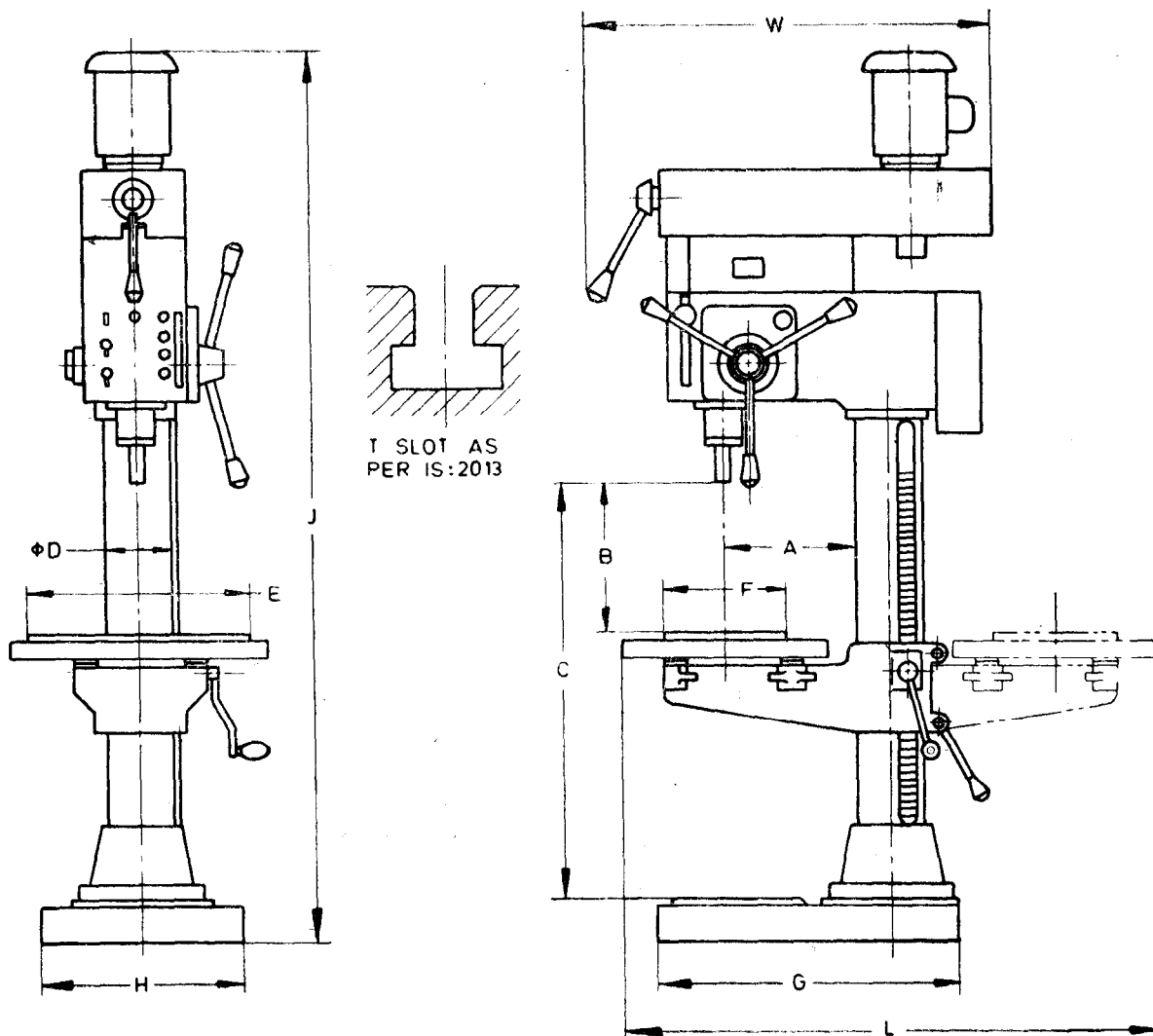
Specifications	Reference to Indian Standard	Unit	Actual Values
(1)	(2)	(3)	(4)
<b>2.8 Coolant Pump</b> a) Output(s) of motor b) Speed of motor c) Discharge of pump at Max working height ( see dimension 'C' in the figure of Appendix A )	IS : 2161-1962	kW rev/min l/min	
<b>2.9 Geometrical and Practical Accuracy</b> a) For bench type drilling machines b) For pillar type drilling machines	IS : 2426-1985 IS : 2425-1982		
<b>2.10 Noise Emitted by Machine</b>	IS : 10988-1984	dB	
<b>2.11 Mechanical Guarding</b>	IS : 9474-1980		
<b>2.12 Colour</b>	IS : 5-1978		
<b>2.13 Weight of Machine with Electricals and Standard Accessories</b>		kg	
<b>2.14 Floor Space Occupied ( length × width )</b>		mm × mm	
<b>2.15 Standard Accessories: Details of Accessories:</b>			
<b>2.16 Special Accessories: Details of Accessories:</b>			
<p><b>Note</b> — While submitting quotations, the following informations shall be furnished by manufacturers/ suppliers together with technical literatures and capacity chart of the machine ( see Appendix A for a representative capacity chart for bench/pillar type drilling machines ).</p> <p>a) Hardness of base plate and table, and</p> <p>b) Any other special features.</p>			

# APPENDIX A

[ Clause 2.8 (c) ]

## REPRESENTATIVE CAPACITY CHART FOR BENCH/PILLAR TYPE DRILLING MACHINES

**Note** — Manufacturers/suppliers shall specify the basic information called for in the figure below:



A = distance between spindle axis and pillar face,  
B = Max/Min distance between spindle-to-worktable,  
C = Max/Min distance between spindle-to-base plate,  
D = dia of cross-section of pillar,

E & F = clamping area,

G & H = overall dimensions of base plate,

J = overall height of machine,

L = swing out position, and

W = overall width of machine.

**EXPLANATORY NOTE**

The proforma for preparation of purchase specification for machine tools has been prepared to enable a prospective buyer to collect data from various manufacturers/suppliers for purposes of comparison. This proforma is meant to be sent out with an enquiry by the purchaser so that the manufacturers/suppliers can fill in the data and send it back to the purchaser to make the comparison easier for the purchaser.

The following standards have been published in this series:

IS : 6893 Proforma for purchase specification for machine tools

IS : 6893 ( Part 1 )-1973 Sliding, surfacing and screw cutting lathes

IS : 6893 ( Part 2 )-1973 Horizontal/universal knee-type milling machines

IS : 6893 ( Part 3 )-1973 Radial drilling machines

IS : 6893 ( Part 4 )-1975 Vertical boring and turning mills

IS : 6893 ( Part 5 )-1975 Milling machines with table of variable heights, with vertical spindle

Reference is made to the following Indian Standards in this standard:

IS : 5-1978 Colours for ready mixed paints and enamels ( *third revision* )

IS : 1231-1974 Dimensions of three-phase foot-mounted induction motors ( *third revision* )

IS : 1715-1973 Dimensions for self holding tapers ( *first revision* )

IS : 2013-1985 Dimensions for T-slots ( *second revision* )

IS : 2161-1962 Coolant pumps for machine tools

IS : 2218-1962 Speeds for machine tools

IS : 2219-1962 Feeds for machine tools

IS : 2425-1982 Test chart for pillar type vertical drilling machines ( *first revision* )

IS : 2426-1985 Test chart for bench drilling machines ( *first revision* )

IS : 2642-1985 Spacing of T-slot ( *second revision* )

IS : 4691-1968 Degrees of protection provided by enclosures for rotating electrical machinery

IS : 4729-1968 Measurement and evaluation of vibration of rotating electrical machines

IS : 6362-1971 Designation of methods of cooling for rotating electrical machines

IS : 7764-1975 Sizes for drilling machines

IS : 9474-1980 Principles of mechanical guarding of machinery

IS : 10988-1984 Method of measuring noise from machine tools ( excluding testing in anechoic chambers )